

**Total Assignments: 1** 

Application #: 09479432 Filing Dt: 01/07/2000 Patent #: NONE Issue Dt:

PCT #: NONE Publication #: NONE Pub Dt:

Inventors: Charles R. Musick, Terence Critchlow, Madhavan Ganesh, Tom Slezak, Krzysztof Fidelis

Title: System and Method for Integrating and Accessing Multiple Data Sources Within a Data

Warehouse Architecture

**Assignment: 1** 

**Reel/Frame:** 010733/0625 Received: Recorded: Mailed: Pages: 05/01/2000 05/01/2000 06/27/2000 4

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignors: MUSICK, CHARLES R. Exec Dt: 01/24/2000

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2	BRS	L3	0	2 and mediator and (metadata or meta-data or (meta adj data))	USPAT; US-PGPUB; EPO; JPO; DERWENT;
3	BRS	L4	11	mediator same (metadata or meta-data or (meta adj data))	USPAT; US-PGPUB; EPO; JPO; DERWENT;
4	BRS	L5	2	4 and (get! and set) near4 method	USPAT; US-PGPUB; EPO; JPO; DERWENT;
5	BRS	L6	0	4 and (get! and set) adj method	USPAT; US-PGPUB; EPO; JPO; DERWENT;
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8	BRS	L9	0	7 and (mediator or (metadata or meta-data or (meta adj data)))	USPAT; US-PGPUB; EPO; JPO; DERWENT;
9	BRS	L10	0	7 and (data adj warehous\$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT;
10	BRS	L11	42	mediator and (metadata or meta-data or (meta adj data))	USPAT; US-PGPUB; EPO; JPO; DERWENT;
11	BRS	L13	0	12 and (get! and set) adj method	USPAT; US-PGPUB; EPO; JPO; DERWENT;
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18	BRS	L18	64	(data adj warehous\$4) and wrapper	USPAT; US-PGPUB; EPO; JPO; DERWENT;
19	BRS	L19	1	18 and mediator and (metadata or meta-data or (meta adj data))	USPAT; US-PGPUB; EPO; JPO; DERWENT;

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**1** Automatically generating OLAP schmata from conceptual

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Karl Hahn , Carsten Sapia , Markus Blaschka Proceedings of the third ACM international workshop on Data warehousing and OLAP November 2000

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Ron Musick , Chris Miller

ACM SIGMOD Record March 1998

Volume 27 Issue 1

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An overview and classification of mediated query systems
Ruxandra Domenig, Klaus R. Dittrich
ACM SIGMOD Record September 1999

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Multimedia technology, global information infrastructures and other developments allow users to access more and more information sources of various types. However, the "technical" availability alone (by means of networks, WWW, mail systems, databases, etc.) is not sufficient for making meaningful and advanced use of all information available on-line. Therefore, the problem of effectively and efficiently accessing and querying heterogeneous and distributed data sources is an impo

Maintaining data warehouses over changing information sources 80% Elke A. Rundensteiner, Andreas Koeller, Xin Zhang Communications of the ACM June 2000 Volume 43 Issue 6

Integrating geographic information systems, spatial digital libraries and information spaces for conducting humanitarian assistance and disaster relief operations in urban environments Vished Kumar, Alejandro Bugacov, Murilo Coutinho, Robert Neches





Proceedings of the seventh ACM international symposium on Advances in geographic information systems November 1999

Report on the 5th international workshop on knowledge representation meets databases (KRDB'98) Alex Borgida, Vinay K. Chaudhri, Martin Staudt ACM SIGMOD Record September 1998

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5 Intelligent access to heterogeneous information sources: report 80% on the 4th workshop on knowledge representation meets

databases

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Franz Baader, Manfred A. Jeusfeld, Werner Nutt ACM SIGMOD Record December 1997 Volume 26 Issue 4

**6** Managing semantic heterogeneity in databases: a theoretical

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4 prospective Richard Hull

Proceedings of the sixteenth ACM SIGACT-SIGMOD-SIGART symposium on Principles of database systems May 1997

Digital libraries for spatial data: G-Portal: a map-based digital library for distributed geospatial and georeferenced resources Ee-Peng Lim, Dion Hoe-Lian Goh, Zehua Liu, Wee-Keong Ng, Christopher Soo-Guan Khoo , Susan Ellen Higgins Proceeding of the second ACM/IEEE-CS joint conference on Digital libraries July 2002

> As the World Wide Web evolves into an immense information network, it is tempting to build new digital library services and expand existing digital library services to make use of web content. In this paper, we present the design and implementation of G-Portal, a web portal that aims to provide digital library services over geospatial and georeferenced content found on the World Wide Web. G-Portal adopts a map-based user interface to visualize and manipulate the distributed geospatial and georef ...

**8** GIS and the internet: A WFS-based mediation system for GIS interoperability

Omar Boucelma, Mehdi Essid, Zoé Lacroix

Proceedings of the tenth ACM international symposium on Advances in geographic information systems November 2002

The proliferation of spatial data on the Internet is beginning to





allow a much wider access to data currently available in various Geographic Information Systems (GIS). In order to move to a real Web-based community where geographical data can be accessed and exchanged, we need to provide flexible and powerful GIS data integration solutions. Indeed, GIS are highly heterogeneous: not only they differ by their data representations, but they also offer radically different query languages. A GIS med ...

Industrial sessions: beyond relational tables: Garlic: a new flavor of federated query processing for DB2
Vanja Josifovski, Peter Schwarz, Laura Haas, Eileen Lin
Proceedings of the 2002 ACM SIGMOD international conference on Management of data June 2002

77%

In a large modern enterprise, information is almost inevitably distributed among several database management systems. Despite considerable attention from the research community, relatively few commercial systems have attempted to address this issue. This paper describes new technology that enables clients of IBM's DB2 Universal Database to access the data and specialized computational capabilities of a wide range of non-relational data sources. This technology, based on the Garlic prototype deve ...

10 Session 5B: mobile software agents: ACQUIRE: agent-based complex query and information retrieval engine Subrata Das, Kurt Shuster, Curt Wu Proceedings of the first international joint conference on Autonomous agents and multiagent systems: part 2 July 2002

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The heterogeneous, distributive and voluminous nature of many government and corporate data sources impose severe constraints on meeting the diverse requirements of users who analyze the data. Additionally, communication bandwidth limitations, time constraints, and multiplicity of data formats impose further restrictions on users of these distributed data sources. What is required is a reliable, robust, and efficient data retrieval technique that can access data from distributed data sources whi ...

11 SchemaSQL: An extension to SQL for multidatabase interoperability

77%

Laks V. S. Lakshmanan , Fereidoon Sadri , Subbu N. Subramanian ACM Transactions on Database Systems (TODS) December 2001 Volume 26 Issue 4

We provide a principled extension of SQL, called *SchemaSQL*, that offers the capability of uniform manipulation of data and schema in relational multidatabase systems. We develop a precise syntax





and semantics of *SchemaSQL* in a manner that extends traditional SQL syntax and semantics, and demonstrate the following. (1) *SchemaSQL* retains the flavor of SQL while supporting querying of both data and schema. (2) It can be used to transform data in a database in a structure substa ...

**12** SI in digital libraries

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- Nabil R. Adam , Vijayalakshmi Atluri , Igg Adiwijaya Communications of the ACM June 2000 Volume 43 Issue 6
- 13 Information integration with attribution support for corporate profiles

Thomas Lee , Melanie Chams , Robert Nado , Michael Siegel , Stuart Madnick

Proceedings of the eighth international conference on Information and knowledge management November 1999

The proliferation of electronically available data within large organizations as well as publicly available data (e.g. over the World Wide Web) poses challenges for users who wish to efficiently interact with and integrate multiple heterogeneous sources. This paper presents CI3, a corporate information integrator, which applies XML as a tool to facilitate data mediation and integration amongst heterogeneous sources in the context of financial analysts creating corporate ...

**14** NSF workshop on industrial/academic cooperation in database

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systems

Mike Carey, Len Seligman ACM SIGMOD Record March 1999 Volume 28 Issue 1

**15** The WHIPS prototype for data warehouse creation and maintenance

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Wilburt J. Labio , Yue Zhuge , Janet L. Wiener , Himanshu Gupta , Héctor García-Molina , Jennifer Widom

ACM SIGMOD Record, Proceedings of the 1997 ACM SIGMOD international conference on Management of data June 1997 Volume 26 Issue 2

A data warehouse is a repository of integrated information from distributed, autonomous, and possibly heterogeneous, sources. In effect, the warehouse stores one or more materialized views of the source data. The data is then readily available to user applications for querying and analysis. Figure 1 shows the basic





architecture of a warehouse: data is collected from each source, integrated with data from other sources, and stored at the warehouse. Users then access the data directly from th ...

**16** A toolkit for negotiation support interfaces to multi-dimensional 77% data

Michael Gebhardt , Matthias Jarke , Stephan Jacobs ACM SIGMOD Record , Proceedings of the 1997 ACM SIGMOD international conference on Management of data June 1997 Volume 26 Issue 2

CoDecide is an experimental user interface toolkit that offers an extension to spreadsheet concepts specifically geared towards support for cooperative analysis of the kinds of multi-dimensional data encountered in data warehousing. It is distinguished from previous proposals by direct support for drill-down/roll-up analysis without redesign of an interface; more importantly, CoDecide can link multiple views on a data cube for synchronous or asynchronoous cooperation by multiple ana ...

17 An overview of data warehousing and OLAP technology
Surajit Chaudhuri, Umeshwar Dayal

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Surajit Chaudhuri , Umeshwar Dayal ACM SIGMOD Record March 1997 Volume 26 Issue 1

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18 Research problems in data warehousing

Jennifer Widom

Proceedings of the fourth international conference on Information and knowledge management December 1995

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Welcome to IEEE Xplore  Home What Can I Access? Log-out  Tables of Contents  Journals Magazines  Conference Proceedings Search By Author Basic Advanced	SEARCH RESULTS [PDF Full-Text (989 KB)] DOWNLO.  Designing data warehouses with OO conceptual models Trujillo, J. Palomar, M. Gomez, J. II-Yeol Song Alicante Univ., Spain This paper appears in: Computer On page(s): 66 - 75 Dec. 2001 Volume: 34 Issue: 12 ISSN: 0018-9162 References Cited: 14 CODEN: CPTRB4 INSPEC Accession Number: 7163419  Abstract: The authors propose an approach that provides a theoretic object-oriented databases and object-relational databases multidimensional database, and online analytical processintroduces a set of minimal constraints and extensions to	n OO conceptual models  I. II-Yeol Song  The state of the provides a theoretical foundation for the object-relational databases in data warehouse, online analytical processing applications. This
Member Services  Join IEEE Establish IEEE Web Account	data analyzers think and, there multidimensional modeling help performance improvements. The implementation of a multidimentation of a multidimentation of a multidimentation on line-analytical-processing too	fore, helps users understand data. Second, is predict what final users want to do, thereby a authors are using their approach to create assional model. They plan to integrate commercal facilities within their GOLD model case tool asse prototyping and sample data generation is
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